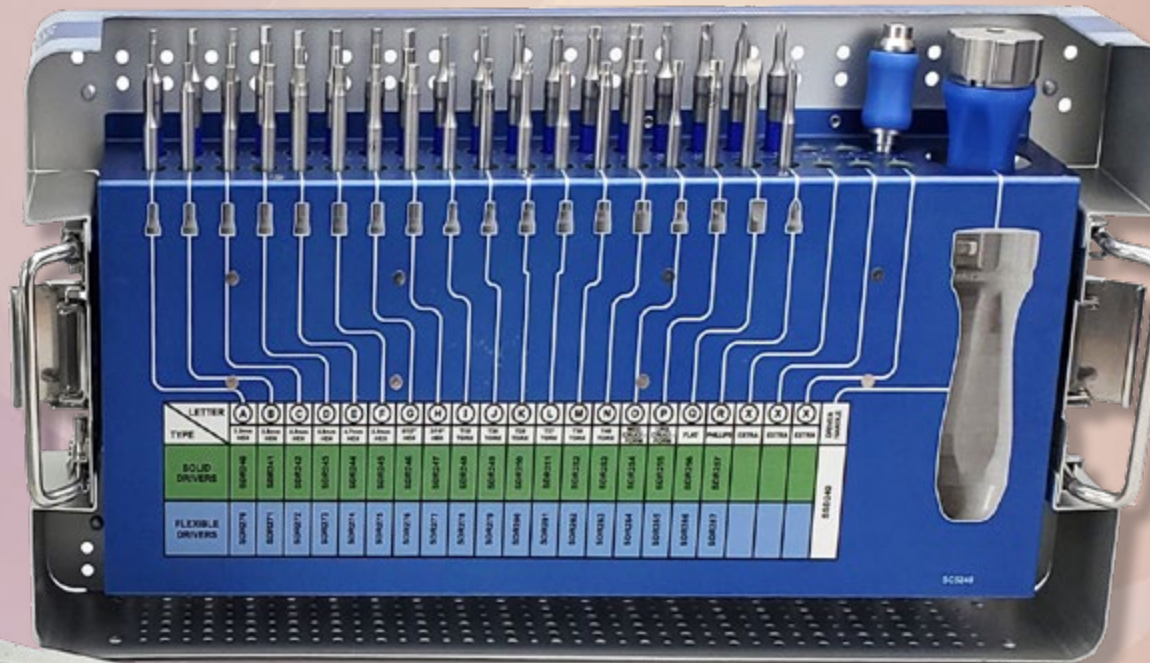


PRODUCT GUIDE

SHUKLA MAX

Universal Large Screw Extraction Solution

#2
System 2 of 15



SHUKLA MEDICAL

Universal Orthopedic Extraction Technologies

Revolutionizing the Art of Revision Surgery

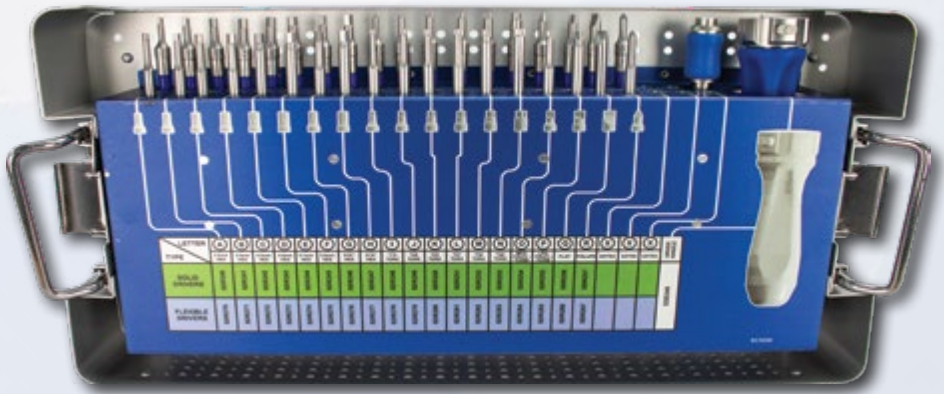
SHUKLA MAXI

Universal Large Screw Extraction Solution

System Name: SHUKLA Maxi v3

Primary Use

The SHUKLA Maxi Universal Large Screw Extraction System from Shukla Medical is a comprehensive screwdriver system designed to simplify the removal and insertion of large bone screws commonly found in both trauma and total joint surgeries.



System History

The first SHUKLA Maxi system was created as an answer to the need for an all-encompassing solution to the ongoing issue of finding the proper driver for the screws encountered during surgery.

The original Maxi system was an acquired product from the original acquisition of the Medical Products Division of Snap-On Tools in the '90s. The first Maxi system used a laydown tray and debuted in 1996. Version 2 however, was the brainchild of the then head of SHUKLA Medical in the year 2009.

That version not only added several brand new tip configurations, but also changed the case design to be vertical as well as added flexible shaft versions for the various drivers. It would be a long while before version 3 would launch, but it definitely was worth the wait. V3 arrived in 2019, bringing additional new drivers, a new hex connection, a brand new handle, a power adaptor, and more.

1996: Version 1 Introduced

2009: Version 2 Introduced

- Flexible Shaft Drivers
- More Drivers
- Vertically Designed Case
- Ratcheting Handle Changed to Silicone

2019: Version 3 Introduced

- More Drivers
- Newly Designed Case with Removable Lid
- New Ergonomic Handle w/ Locking Capability
- Hudson Power Connector
- Square Connections Changed to Hex

Key Benefits

- 18 Drivers designed for universal bone screw configuration compatibility.
- Ratcheting quick connect silicone handle with locking capability allows for easier and simpler screw removal with less hand fatigue.
- Hudson Power Adapter lets surgeons connect to a power drill for even faster screw removal.
- All drivers are included in both rigid and flexible shaft formats for maximum surgical options.
- Aerospace grade flexible shaft technology gives easy access to hard to reach geometry. This allows drivers to flex up to 90 degrees without sacrificing torque.



- Driver tip configurations cover all head variations: Cruciform, Flat, Hex, Phillips, and Torx.



Universal Shukla System Benefits for Better Patient Outcomes

Less Time Spent in O.R.

- Reduces risk of infection to patient
- Reduces time spent under anesthesia
- Reduces cost to the hospital

Universal Designs

- Less prep time for surgeons
- Less space taken up in the O.R.
- Reduces need for other systems or tools

Ergonomic Design

- Reduces surgeon stress
- Reduces surgeon fatigue
- Better grip/reduces slippage

Comprehensive Design

- Addresses all known challenges
- Tools ensure surgery is a success
- Provides backup solutions during surgery

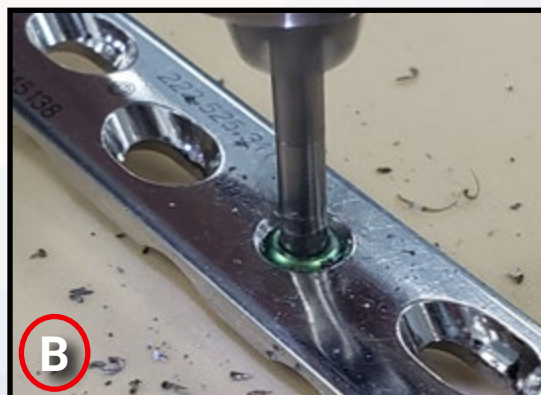
Alternative Method Comparison

Before Shukla released the Maxi system, surgeons needed either the correct specific driver designed for the screw ahead of time, or needed to have the reps for the implant in the O.R. with the proper tools at the ready. The only other alternative method for removing a screw during revision surgery was a less than ideal method - First, the screw head would need to be drilled off, and the plate pried off the bone. Then, the surgeon would need to use a bone chisel to chip away at the bone surrounding the screw, finally trying to grip the screw shaft with pliers to twist it out.

This led to higher O.R. costs, lower success rates, higher surgeon frustration, and lower patient approval. The SHUKLA Maxi removes all of the uncertainty of screw removals and gives a single universal solution.



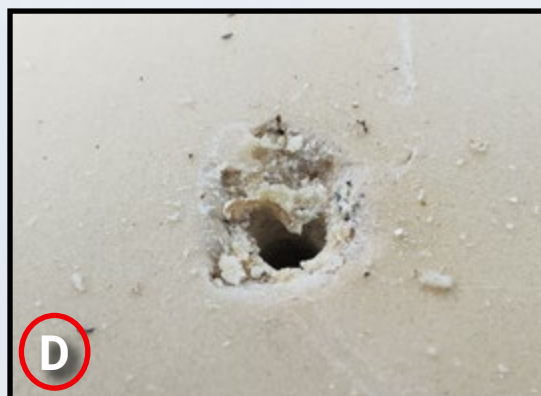
A: The ideal way - using a SHUKLA Maxi Driver



B: Using a drill bit to drill off the screw head



C: Using pliers to try and remove the screw shaft



D: Unnecessary bone loss from non Shukla methods

Return On Investment Justification

According to a study published in JAMA Surgery, the cost of one minute in an O.R. can vary anywhere from \$36 per minute to \$100 per minute, with the average cost of a minute in the O.R. at a staggering \$66! It is estimated that having all the right drivers on-hand can save about 30 minutes per surgery. Taking just the lowest estimate of time savings, the savings per surgery can be estimated at 30 minutes x \$36 per minute = \$1,080. With the SHUKLA Maxi system, a screw removal that would normally take anywhere between 20 minutes to over an hour can be removed in minutes! Between that and the time saved not having to hunt down the proper rep or driver for the procedure, the SHUKLA Maxi system pays for itself in record time. In fact, a SHUKLA Maxi sells for \$9,800 - it pays for itself in only nine uses!

When You Don't Have It

Without a SHUKLA Maxi system, or the correct specific driver designed for the screw, two alternative options are usually available: Wasting hours drilling off the heads, prying off the plate, and wasting effort (and bone) trying to remove the remaining shafts. Or sending out techs to open up already sterilized trays, hunting for a specific driver - wasting time, money, and piling more work upon an already overworked Sterile Processing Department.

However, with a SHUKLA Maxi system on hand, this scenario would never occur.

How We Compare

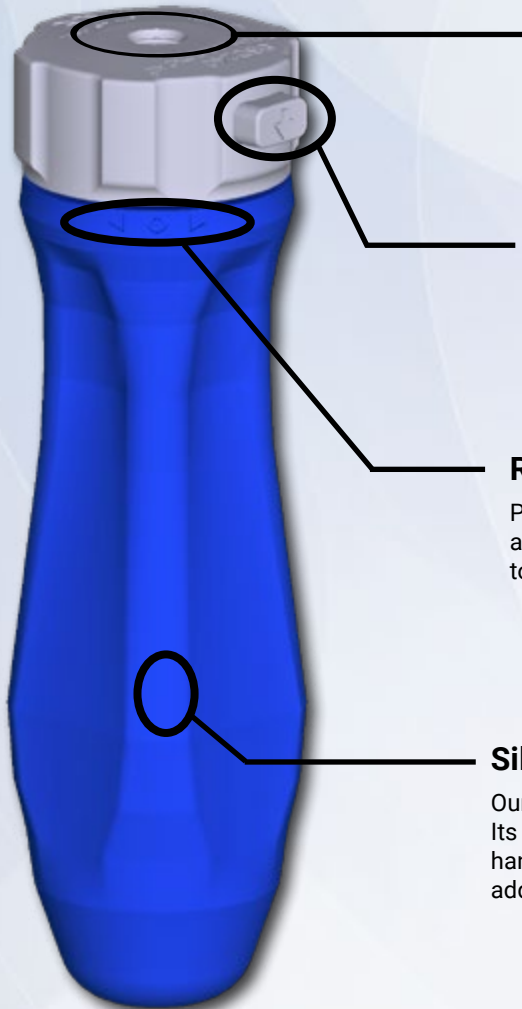
Most orthopaedic implant manufacturers provide revision/extraction tools suited *only* for their own implants. Even suppliers that claim to offer extraction sets basically have an assortment of tools thrown together as an afterthought. For Shukla Medical, **extraction is what we do**. Our engineers design truly universal tools to help remove any implant/hardware out there, making our competition essentially nonexistent. Our patented designs are revolutionizing the art of revision surgery; we proudly stand alone. We have still tried to provide a comparison to other systems on the market.

There are several makers of screwdriver sets similar to the SHUKLA Maxi but none come close in price, value, or design. The SHUKLA Maxi handle is much more user-friendly. We offer a stand-up tray which makes tip selection easier and allows for more efficient use of the valuable table space in the O.R. We provide a larger number of drivers than our competition on top of flexible shaft versions for the drivers. Other companies sell their sets for upwards of \$15,000. Our closest competitors offer anywhere from 12 to 32 drivers compared to the whopping 37 drivers provided with the SHUKLA Maxi.

PATENTS

- Push-to-Connect Ratcheting Handle

The SHUKLA Maxi system is all about the drivers. Our patented handle was crafted by our team of talented engineers.



Push-to-Connect Chuck

Allows for easy engagement of our drivers to the handle. Engineered for speed and efficiency, a simple push locks the driver into place.

Unlock Button

When the drivers are locked into place during screw removal, a press of the Unlock Button releases the driver from the handle. This makes swapping out drivers a breeze.

Ratcheting Action

Possesses the ability to ratchet both forward and in reverse. Also has a locked setting for non-ratcheting turns. Allows for continuous motion to save both time and surgeon fatigue.

Silicone Handle

Our new handle is overmolded with silicone for maximum comfort. Its ergonomic design was engineered specifically to reduce surgeon hand fatigue during longer surgeries with multiple screws to remove. In addition, the silicone helps prevent slippage during surgery.

Attention to Detail

At Shukla Medical, we always sweat the small stuff. When it comes to the Maxi, our attention to detail is why it rose above other similar sets in the marketplace. Our drivers are long, with narrow necks at the tip, granting the surgeon improved visibility as well as access to deep-seated screws.



The switch from square to hex connections allowed us to add a better locking capability to the handle, eliminating the slippage and disconnection of drivers during surgery.

As mentioned earlier, the best example of our attention to detail is in our flexible shaft drivers. But to understand *why* that is so important, we need to take a brief walk down memory lane and look at our parent company, S.S. White...



The flexible shafts in the SHUKLA Maxi system are manufactured by the world leader in flexible shaft technology, S.S. White Technologies. These shafts are made from medical and aerospace grade 17-7PH stainless steel wrapped in a protective silicone casing. Why are S.S. White flexible shafts so useful? Our company has not only been designing and manufacturing them since before the invention of the electric light bulb, we also pioneered their use in the medical field. We are the first and only company with proprietary software called Perflexion® to optimize every characteristic of the flexible shaft. This results in our flexible shafts delivering a nearly full 1:1 torque ratio through the full range of bend radii in **BOTH** forward and reverse.

The flexible drivers are a 'must' in acetabular cup cases, shoulder cases and anything else where you do not have a direct line of access to the screw you are removing. With every tip configuration offered in the Maxi offered in a flexible shaft version as well, rest assured that you can remove any screw, in any location, at any time.

Components List

Component List		
Std Qty	Part Number	Description
1	SAD001	Adapter Assy, Hudson Power Drill, 2.75"
1	SCS240	Case & Lid, MAXI System
1	SDR240	Driver, Rigid, Hex, 3 mm
1	SDR241	Driver, Rigid, Hex, 3.5 mm
1	SDR242	Driver, Rigid, Hex, 4 mm
1	SDR243	Driver, Rigid, Hex, 4.5 mm
1	SDR244	Driver, Rigid, Hex, 4.7 mm
1	SDR245	Driver, Rigid, Hex, 5 mm
1	SDR246	Driver, Rigid, Hex, 5/32"
1	SDR247	Driver, Rigid, Hex, 3/16"
1	SDR248	Driver, Rigid, Torx, T15
1	SDR249	Driver, Rigid, Torx, T20
1	SDR250	Driver, Rigid, Torx, T25
1	SDR251	Driver, Rigid, Torx, T27
1	SDR252	Driver, Rigid, Torx, T30
1	SDR253	Driver, Rigid, Torx, T40
1	SDR254	Driver, Rigid, Cruciform, 3.8 mm
1	SDR255	Driver, Rigid, Cruciform, 5.5 mm
1	SDR256	Driver, Rigid, Flat
1	SDR257	Driver, Rigid, Phillips

Component List		
Std Qty	Part Number	Description
1	SDR270	Driver Assy, Flexible, Hex, 3 mm
1	SDR271	Driver Assy, Flexible, Hex, 3.5 mm
1	SDR272	Driver Assy, Flexible, Hex, 4 mm
1	SDR273	Driver Assy, Flexible, Hex, 4.5 mm
1	SDR274	Driver Assy, Flexible, Hex, 4.7 mm
1	SDR275	Driver Assy, Flexible, Hex, 5 mm
1	SDR276	Driver Assy, Flexible, Hex, 5/32"
1	SDR277	Driver Assy, Flexible, Hex, 3/16"
1	SDR278	Driver Assy, Flexible, Torx, T15
1	SDR279	Driver Assy, Flexible, Torx, T20
1	SDR280	Driver Assy, Flexible, Torx, T25
1	SDR281	Driver Assy, Flexible, Torx, T27
1	SDR282	Driver Assy, Flexible, Torx, T30
1	SDR283	Driver Assy, Flexible, Torx, T40
1	SDR284	Driver Assy, Flexible, Cruciform, 3.8 mm
1	SDR285	Driver Assy, Flexible, Cruciform, 5.5 mm
1	SDR286	Driver Assy, Flexible, Flat
1	SDR287	Driver Assy, Flexible, Phillips
1	SSD240	Handle Assy, In-Line, Ratcheting, Hex, 1/4"



Revolutionizing the Art of Revision Surgery

Shukla Medical designs and manufactures instrumentation for orthopedic implant extraction at our headquarters in St. Petersburg, Florida, USA. We are proud to be an ISO 13485:2016 Certified company.

In 1998, aerospace component manufacturer S.S. White Technologies, Inc. acquired the Medical Products Division of Snap-On. S.S. White rebranded the medical division in 2007 to create Shukla Medical.

Today, Shukla Medical is the industry leader in orthopedic implant extraction tools. We are the only company to offer a comprehensive, truly universal orthopedic revision line for removing IM nails, hip and knee implants, spine hardware, and broken or stripped screws. Surgeons and industry leaders know: **If Shukla can't get it out, no one can.**

Contact us to learn more

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SHUKLA Surgical Tech Support
24 hours a day, 7 days a week
727-626-2771

When you have tried all known techniques to extract an implant or remove a screw but determine you need suggestions for alternate techniques, help is only a phone call away. We will quickly put you in touch with our Technical Experts who will suggest other solutions to use our tools.



SHUKLA Medical offers the best warranty in the industry. Every component in a SHUKLA extraction system is designed and manufactured by us. Every component in our extraction systems that is not a single-use* or a wear* component is warranted against manufacturing defects for the life* of the system. All other parts are covered for as long as the purchased version of the system is actively marketed by SHUKLA Medical.

*Please see our website for the complete explanation of these terms and full details on our warranty.